

I. LISTING OF THE CLAIMS

This listing of Claims will replace all prior versions, and listings, of claims in the application:

Claim 1 (CURRENTLY AMENDED) A method of diagnosing a patient, ~~implemented as a set of instructions executed performed by a computing device server~~, through the reuse of medical script objects used in the automated diagnosis or management of a medical condition, the method comprising:

~~providing, to the computing device, retrieving~~ a plurality of disease objects, each disease object processing data indicative of an abnormal health state or disease;

~~providing, to the computing device, retrieving~~ a plurality of symptom objects, each symptom object processing data indicative of at least a patient sign, complaint, finding, or test result;

~~associating, via the computing device,~~ a disease object with at least one symptom object;

~~assigning, via the computing device,~~ a weight for each symptom object, wherein a particular disease object includes a preferred weight for one or more preferred symptom objects and an alternative weight for one or more related alternative symptom objects, wherein the preferred symptom objects and the alternative symptom objects for a particular preferred symptom object are selected from a set of archived symptom objects that are available for reuse;

using one of the archived symptom objects in conjunction with a plurality of disease objects;

receiving, via ~~direct~~ interactive dialogue between a user and the ~~computing device, server~~ a patient symptom input;

associating the patient symptom input with at least one symptom

object;

selecting, ~~via the computing device~~, at least one disease object applicable to a patient based on at least one of the preferred symptom object or the alternative symptom object;

invoking, ~~via the computing device~~, a preferred symptom object or one of the related alternative symptom objects for the selected disease object so as to determine a diagnosis of a patient based on the object invocation; [and]

assigning a new name for a symptom object that is reused; and

outputting, via the computing device, a diagnosis based at least one of the invoking or selecting,

wherein each object comprises an encapsulated combination of data and processes that manipulate the data.

Claim 2 (CANCELED)

Claim 3 (ORIGINAL) The method defined in Claim 1, wherein the set of archived symptom objects is stored in a database.

Claim 4 (ORIGINAL) The method defined in Claim 3, additionally comprising accessing the set of archived symptom objects stored in the database via a global computer network.

Claim 5 (PREVIOUSLY PRESENTED) The method defined in Claim 1, wherein each symptom object has underlying objects used to establish a symptom, wherein the objects are arranged in a hierarchical relationship.

Claim 6 (CURRENTLY AMENDED) An object based automated diagnostic system comprising:

a server computing device; and
computer code, non-transitory computer executable program code,
configured to execute on the computing device, server, wherein the
server is configured to: the computer code, comprising:
execute a plurality of diagnostic objects which interact, as executed by
the computing device, to receive input from a user and, as a result of
said interaction, determine a diagnosis of a patient, wherein the
objects include at least two diagnostic objects comprising:
a disease object processing data indicative of an abnormal health
state or disease, a symptom object processing data indicative
of a patient sign, complaint, finding, or test result, a valuator
object processing data indicative of a value of a symptom of
the patient, a question object processing data indicative of
questions to ask the patient specific to a specific symptom of
the patient, a node object processing data indicative of a
single well-defined question to the patient[,]; and
a candidates object processing data indicative of candidate
diseases for diagnosis of the patient, wherein the objects are
arranged in a hierarchical relationship such that the result of
one of the objects is input to another of the objects; and
assign a new name for a symptom object that is reused,
wherein at least one of the diagnostic objects directly invokes another
of the diagnostic objects in a computer-based medical diagnostic
system so as to output a diagnosis of a patient based on the prior
object invocation,
wherein each object has corresponding data and processes, and wherein
the data is encapsulated so that other objects only see the processes
of a particular object that can be invoked to access the data.

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Claim 7 (PREVIOUSLY PRESENTED) The system of Claim 6, wherein the diagnostic objects include a plurality of disease objects and a plurality of symptom objects.

Claim 8 (CURRENTLY AMENDED) The system of Claim 6, wherein the server is further configured to execute ~~additionally comprising~~ an engine object to coordinate the other objects.

Claim 9 (CURRENTLY AMENDED) An object based automated diagnostic system comprising:

a server computing device; and

computer code, non-transitory computer executable program code, configured to execute on the computing device, server, wherein the server is configured to: the computer code, comprising:

execute a plurality of diagnostic objects which interact to receive input from a user and, as a result of said interaction, determine a diagnosis of a patient, wherein the diagnostic objects include at least a plurality of disease objects, each disease object processing data indicative of an abnormal health state or disease[,];

execute a plurality of symptom objects, each symptom object processing data indicative of a patient sign, complaint, finding, or test result, and a plurality of valuator objects, each valuator object processing data indicative of a value of a symptom of the patient[,]; and

assign a new name for a symptom object that is reused,

wherein at least some of the diagnostic objects perform their own tasks and directly call upon other diagnostic objects to perform their tasks at the appropriate time in a computer-based medical diagnostic system so as to output a diagnosis of a patient, and

wherein each object has corresponding data and processes, and wherein the data is encapsulated so that other objects only see the processes of a particular object that can be invoked to access the data.

Claim 10 (PREVIOUSLY PRESENTED) The system of Claim 9, wherein at least one of the plurality of disease objects includes a preferred weight for a preferred symptom and an alternative weight for one or more alternative symptoms of the preferred symptom.

Claim 11 (CURRENTLY AMENDED) A method of diagnosing a patient through the reuse of medical script objects ~~implemented as a set of instructions executed by a computing device and used performed by a server~~ in the automated diagnosis or management of a medical condition, the method comprising:

executing ~~providing~~ a plurality of disease objects, each disease object processing data indicative of an abnormal health state or disease and each disease object associated with a plurality of symptom objects, each symptom object processing data indicative of a patient sign, complaint, finding, or test result;

receiving, via ~~direct~~ interactive dialogue between a user and the ~~computing device, server~~, a patient symptom input;

associating the patient symptom input with at least one symptom object;

assigning, ~~via the computing device~~, a weight for one or more symptoms, wherein a particular disease object includes a preferred weight for one or more preferred symptoms and an alternative weight for one or more alternative symptoms, wherein the alternative symptoms for a particular preferred symptom are selected from a set of archived symptom objects that are available for reuse, and wherein the particular preferred symptom has one or more related alternative symptoms that represent different approaches for eliciting further diagnostic information related to a same patient health condition;

using one of the archived symptom objects in conjunction with a plurality of disease objects;

assigning a new name for a symptom object that is reused;

selecting, ~~via the computing device~~, from the plurality of disease objects, a disease object applicable to a patient;

invoking, ~~via the computing device~~, a preferred symptom object or one of the related alternative symptom objects for the selected disease

object so as to output a diagnosis of a patient based on the object invocation; and
~~outputting, via the computing device,~~ a diagnosis based at least one of the invoking or selecting.

Claim 12 (PREVIOUSLY PRESENTED) The method of Claim 11, wherein the one or more alternative symptom is a plurality of symptoms, wherein the alternative weight is a plurality of alternative weights, and wherein the alternative weights for the plurality of alternative symptoms of the particular preferred symptom are different.

Claim 13 (PREVIOUSLY PRESENTED) The method of Claim 12, wherein the alternative weights for the one or more alternative symptoms of the particular preferred symptom and the preferred weight of the particular preferred symptom are different.

Claim 14 (CANCELED)

Claim 15 (PREVIOUSLY PRESENTED) The method of Claim 11, wherein the set of archived symptom objects is stored in a database.

Claim 16 (PREVIOUSLY PRESENTED) The method of Claim 15, additionally comprising accessing the set of archived symptom objects stored in the database via a global computer network.

Claim 17 (PREVIOUSLY PRESENTED) The method of Claim 11, wherein each symptom object has underlying objects used to establish a symptom.

Claim 18 (CANCELED)

Claim 19 (PREVIOUSLY PRESENTED) The method defined in Claim 1, wherein a particular preferred symptom is selected when a particular diagnosis is likely.

Claim 20 (PREVIOUSLY PRESENTED) The system of Claim 6, wherein the objects include a disease object, a symptom object, a valuator object, a question object, a node object and a candidates object.

Claim 21 (PREVIOUSLY PRESENTED) The system of Claim 20, wherein the symptom object invokes the valuator object.

Claim 22 (PREVIOUSLY PRESENTED) The system of Claim 20, wherein the valuator object invokes the question object.

Claim 23 (PREVIOUSLY PRESENTED) The system of Claim 20, wherein the question object invokes the node object.

Claim 24 (PREVIOUSLY PRESENTED) The system of Claim 6, wherein a particular disease is associated with a plurality of disease objects corresponding to different phases of the particular disease.

Claim 25 (PREVIOUSLY PRESENTED) The system of Claim 6, wherein a particular disease is associated with a plurality of disease objects corresponding to different populations for the particular disease.

Claim 26 (PREVIOUSLY PRESENTED) The system of Claim 6, wherein a particular disease object is representative of a plurality of related diseases that share common symptoms.

Claim 27 (PREVIOUSLY PRESENTED) The system of Claim 6, wherein the objects act independently of other objects and a particular object retains a record of its actions for future reference.

Claim 28 (CANCELED)

Claim 29 (PREVIOUSLY PRESENTED) The system of Claim 6, wherein a particular disease object monitors the questions and answers of other disease objects.

Claim 30 (PREVIOUSLY PRESENTED) The system of Claim 8, wherein the engine object coordinates a plurality of concurrently operating disease objects by switching execution among the disease objects.

Claim 31 (PREVIOUSLY PRESENTED) The system of Claim 9, wherein one of the symptom objects invokes one of the valuator objects.

Claim 32 (PREVIOUSLY PRESENTED) The system of Claim 9, wherein the plurality of objects includes a plurality of question objects and node objects.

Claim 33 (PREVIOUSLY PRESENTED) The system of Claim 32, wherein one of the valuator objects invokes one of the question objects.

Claim 34 (PREVIOUSLY PRESENTED) The system of Claim 32, wherein one of the question objects invokes one of the node objects.

Claim 35 (PREVIOUSLY PRESENTED) The system of Claim 9, wherein a particular disease is associated with a plurality of disease objects corresponding to different phases of the particular disease.

Claim 36 (PREVIOUSLY PRESENTED) The system of Claim 9, wherein a particular disease is associated with a plurality of disease objects corresponding to different populations for the particular disease.

Claim 37 (PREVIOUSLY PRESENTED) The system of Claim 9, wherein a particular disease object is representative of a plurality of related diseases that share common symptoms.

Claim 38 (PREVIOUSLY PRESENTED) The system of Claim 9, wherein the objects act independently of other objects and a particular object retains a record of its actions for future reference.

Claim 39 (CANCELED)

Claim 40 (PREVIOUSLY PRESENTED) The system of Claim 9, wherein a particular disease object monitors the questions and answers of other disease objects.

Claim 41 (CURRENTLY AMENDED) The system of Claim 9, additionally comprising executing an engine object to coordinate the other objects.

Claim 42 (PREVIOUSLY PRESENTED) The system of Claim 41, wherein the engine object coordinates a plurality of concurrently operating disease objects by switching execution among the disease objects.

Claim 43 (CANCELED)

Claim 44 (PREVIOUSLY PRESENTED) The method of Claim 11, wherein a particular preferred symptom is selected when a particular diagnosis is likely.

Claim 45 (PREVIOUSLY PRESENTED) The method of Claim 1, wherein a particular disease is associated with a plurality of disease objects corresponding to different phases of the particular disease.

Claim 46 (PREVIOUSLY PRESENTED) The method of Claim 1, wherein a particular disease is associated with a plurality of disease objects corresponding to different populations for the particular disease.

Claim 47 (PREVIOUSLY PRESENTED) The method of Claim 1, wherein a particular disease object is representative of a plurality of related diseases that share common symptoms.

Claim 48 (PREVIOUSLY PRESENTED) The method of Claim 1, wherein the selected disease object directly invokes another of the plurality of disease objects.

Claim 49 (PREVIOUSLY PRESENTED) The system of Claim 6, wherein the disease object directly invokes another disease object.

Claim 50 (PREVIOUSLY PRESENTED) The system of Claim 6, wherein the disease object directly invokes the symptom object.

Claim 51 (PREVIOUSLY PRESENTED) The system of Claim 9, wherein one of the plurality of disease objects directly calls another of the plurality of disease objects.

Claim 52 (PREVIOUSLY PRESENTED) The method of Claim 11, wherein the selected disease object directly invokes another of the plurality of disease objects.

Claim 53 (PREVIOUSLY PRESENTED) The method of Claim 1, wherein the diagnosis identifies at least one abnormal health state.

Claim 54 (PREVIOUSLY PRESENTED) The system of Claim 6, wherein the diagnosis identifies at least one abnormal health state.

Claim 55 (PREVIOUSLY PRESENTED) The system of Claim 9, wherein the diagnosis identifies at least one abnormal health state.

Claim 56 (PREVIOUSLY PRESENTED) The method of Claim 11, wherein the diagnosis identifies at least one abnormal health state.